Algorithm Generate diverse travel route

$cur := \text{source}$, $Path := \{\text{source}\}$

$Labels := \text{sourse}.Label$, total travel time $:= 0$

while $|Path| < WantedNumber$ **do**

    $next := \emptyset$

    $Candidate \leftarrow \text{traveltime}(cur, attraction_i) \leq \text{time limitation},$
                $\forall attraction_i \in \text{dataset}$

    if # nonzero entry of $Labels$ can't be improved **then**

        $next \leftarrow \mathbf{argmin}_{c_i}(\mathbf{Var}(Label + c_i.Label) + \text{traveltime}(cur, c_i)),$
             $\forall c_i \in Candidate$

    else

        $Targets \leftarrow \mathbf{argmax}_{c_i} \text{ (# nonzero entry of } Labels + c_i.Label),$
             $\forall c_i \in Candidate$

        $next \leftarrow \mathbf{argmin}_{t_i}(\mathbf{Var}(Labels + t_i.Label) + \text{traveltime}(cur, t_i)),$
             $\forall t_i \in Targets$

    end if

    Update :

        $Path \leftarrow Path \cup next$, $Labels \leftarrow Labels + next.Label$

        total travel time $\leftarrow$ total travel time $+ \text{traveltime}(cur, next)$

        $cur \leftarrow next$

end while

return $Path$, $Labels$, total travel time